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ARTHUR E. LUNDVALL, JR.  
VICE PRESIDENT  
SUPPLY

July 20, 1981

Mr. Harold R. Denton, Director  
Office of Nuclear Reactor Regulation  
U.S. Nuclear Regulatory Commission  
Washington, DC 20555



Subject: Calvert Cliffs Nuclear Power Plant, Units Nos. 1 & 2  
Docket Nos. 50-317 & 50-318  
Request for Amendments

Reference: (a) NRC letter dated 7/31/79 from R. W. Reid to  
A. E. Lundvall, Jr., Amendments 40 and 22

Dear Mr. Denton:

Baltimore Gas and Electric Company (BG&E) hereby requests Amendments to Operating Licenses DPR-53 and DPR-69 for Calvert Cliffs Units Nos. 1 and 2, respectively, with the submission of the enclosed proposed changes to the Technical Specifications. These changes apply to both Units. The i<sup>2</sup>CR number shown on each change is for BG&E internal use only.

TECHNICAL SPECIFICATION CHANGES

Change No. 1 (FCR 81-1037)

Change paragraph 3.8.2.3 ACTION Statement b. to read as follows:

With one 125-volt DC battery and/or both chargers inoperable, except during surveillance testing per Specifications 4.8.2.3.2.c.2, 4.8.2.3.2.d and 4.8.2.3.2.e, within 2 hours:

1. Restore the inoperable battery to OPERABLE status or replace it with the Reserve Battery; and/or
2. Restore at least one inoperable charger to OPERABLE status

or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

Change paragraph 3.8.2.3 ACTION Statement d. to read as follows:

With one 125-volt DC battery inoperable during surveillance testing of the battery per Specification 4.8.2.3.2.e, operation may continue provided the associated bus is being powered by the Reserve Battery and an OPERABLE charger.

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Change paragraph 4.8.2.3.2 to read as follows:

Each 125-volt battery bank and charger and the Reserve Battery shall be demonstrated OPERABLE: ....

Change paragraph 4.8.2.3.2.d.2.a to read as follows:

Batteries 11, 21 and Reserve:

Add an asterisk (\*) to paragraph 4.8.2.3.2.d.2 as shown below

At the completion of this battery test, the battery charger shall be demonstrated capable of recharging the battery \* ....

Add a new asterisk at the bottom of page 3/4 8-10 with the following footnote:

\* Not applicable when testing the Reserve Battery

Change paragraph 4.8.2.3.2.e as follows:

delete the words "during shutdown\*" and the corresponding asterisk footnote at the bottom of page 3/4 8-10.

#### Discussion and Justification

The above changes will allow the substitution of the Reserve Battery, a fully-qualified safety grade battery, for any of the existing 125 volt DC batteries during operation or surveillance testing. The use of this battery during specific surveillance testing was previously approved by NRC in Reference (a). At that time, the battery was situated in a temporary location on the turbine deck pending completion of the permanent location room. The NRC Safety Evaluation accompanying Reference (a) recognized the battery and associated equipment to be a fully-qualified safety-related backup battery system.

We have completed the installation of the battery, now designated the Reserve Battery, in its permanent location, a new battery room on elevation 45' of the Auxiliary Building. The details of the installation are provided in Attachment 1 and Figure 1.

The proposed changes detailed above are intended to:

1. Allow the substitution of the Reserve Battery for any one of the existing 125-volt DC batteries determined to be inoperable;
2. Allow the substitution of the Reserve Battery for any one of the existing 125-volt DC batteries, during operation, for surveillance or capacity testing; and
3. Impose the same surveillance and testing requirements on the Reserve Battery as for the existing 125-volt DC batteries.

Change No. 2 (FCR 81-1036):

Add a new subparagraph (e) to the Action Statement for paragraph 3.8.2.3 as follows:

- e. With one cell having a voltage decrease more than 0.10 volts from the acceptance test value but still 2.10 volts per Surveillance requirement 4.8.2.3.2.b.1, either restore/replace the cell or replace the affected battery with the Reserve battery within 24 hours or be in hot standby within the next 6 hours and in cold shutdown within the following 30 hours.

Discussion and Justification

As presently worded, the technical specifications indicate that a battery which has a single cell voltage decrease of more than 0.10 from the acceptance test value per Surveillance Requirement 4.8.2.3.2.b.1 is inoperable and that ACTION Statement (a) applies, requiring corrective action within 2 hours.

In reality, a battery cell whose voltage has decreased 0.10 volts from the acceptance test value but is still 2.10 volts is not necessarily a bad cell. The cell still has sufficient voltage to meet its design requirement as long as its voltage is 2.10 volts. Therefore, the presently allowed 2 hours for corrective action is unnecessarily restrictive from a safety standpoint and, in addition, does not provide sufficient time to carry out that corrective action before a shutdown is required. The requested change would allow the restoration/replacement of the affected cell or the substitution of the Reserve Battery and would allow sufficient time for doing so.

REQUIRED DATES FOR ABOVE CHANGES

Change No. 1 is requested on a priority basis by July 31, 1981 or as soon thereafter as possible since we will be conducting battery surveillance at that time, and the Reserve Battery may be needed to substitute for one of the existing batteries, should one be determined to be inoperable.

Change No. 2 is of a lower priority, and although it affects the same technical specification section as Change No. 1, we have shown it separately so as to facilitate its processing without affecting the priority handling of Change No. 1.

SAFETY REVIEW

The enclosed changes have been reviewed by our Plant Operations and Safety Review Committee and Off-Site Safety and Review Committee, and they have concluded that the changes will not result in an undue risk to the public health and safety.

FEE DETERMINATION

We have determined, pursuant to 10 CFR Part 170, that the requested changes involve a single safety issue, i.e., the substitution of a Reserve Battery for an existing battery, and therefore constitute a Class III and a Class I amendment for Units 1 and 2, respectively. Accordingly, a check in the amount of \$4,400.00 for the requisite fee will be sent under separate cover.



## ATTACHMENT 1

A fully qualified, safety related, 125 volt DC Reserve battery system has been installed at Calvert Cliffs Nuclear Power Plant (CCNPP). This Reserve battery system will be used to replace any one of the four existing safety related 125 volt control batteries. CCNPP Units Nos. 1 and 2 have four safety related 125 volt DC buses (Buses 11, 12, 21 and 22) that are shared by both units. Each bus has its associated 1350 ampere-hour battery and 400 ampere battery chargers. The Reserve battery, rated at 1500 Ahr, is sufficient capacity to replace any of the existing batteries.

The Reserve battery system basically includes a 1500 Ahr. fully qualified battery, a 1200 ampere transfer switch and 1200 ampere disconnect switches. (See Figure 1) The charger and its associated disconnect switches are non-safety related since they will never be electrically connected to the safety-related systems. The Reserve Battery is on a continuous float charge until which time it is transferred from the charger to the load.

The new system has been installed such that no permanent connections were made to the existing 125 VDC buses. This will guarantee no cross-connections between any of the 4 safety-related busses each of which is a different separation group. At the time of the Reserve battery use as a replacement for one of the four vital batteries, cables will be connected between the respective unit's 1200 ampere disconnect switch and the bus of the battery being replaced. Only one set of these cables have been fabricated, ensuring only one 125 VDC bus can be connected at a time to the Reserve battery. With the exception of this set of cables, the entire safety related portion of the Reserve battery system is permanently installed and available for use. This arrangement of a set of cables being utilized for the final connection to the 125 VDC bus, ensures compliance with the plant's single failure criteria.

All switching equipment is located in the cable spreading room, Elevation 27, where the existing DC Switchgear is located. The Reserve battery is permanently located in a new battery room on Elevation 45' in the Auxiliary Building. This room sits directly over the cable spreading room which allows the shortest possible cable run in conduit to the switching equipment. The Reserve battery is enclosed with three (3) hour fire-rated walls. The Reserve battery room has sufficient ventilation and has fire and air flow detectors.

